

Dim.		Inches	Millimeters		
Min.	Max.	Min.	Max.	Notes	
A	---	2.450	---	62.23	
B	1.350	1.400	34.29	35.56	
C	0.700	0.800	17.78	20.32	
D	---	0.625	---	15.88	
E	3.140	3.160	79.76	80.26	
F	---	3.650	---	92.71	
G	0.280	0.300	7.140	7.670	Dia.

TO-244AB

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST20035*	35V	35V
FST20040*	40V	40V
FST20045*	45V	45V
FST20050*	50V	50V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 200 Amperes/35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

Average forward current per pkg	F(AV) 200 Amps	T _C = 143°C, Square wave, R _{θJC} = 0.25°C/W
Average forward current per leg	F(AV) 100 Amps	T _C = 143°C, Square wave, R _{θJC} = 0.50°C/W
Maximum surge current per leg	IFSM 2000 Amps	8.3ms, half sine, T _J = 175°C
Maximum repetitive reverse current per leg	IR(OV) 2 Amps	f = 1 KHZ, 25°C, 1 μsec square wave
Max peak forward voltage per leg	VFM 0.80 Volts	FM = 200A; T _J = 25°C*
Max peak forward voltage per leg	VFM 0.60 Volts	FM = 200A; T _J = 175°C*
Max peak reverse current per leg	IRM 75 mA	V _{RRM} , T _J = 125°C*
Max peak reverse current per leg	IRM 4.0 mA	V _{RRM} , T _J = 25°C
Typical junction capacitance per leg	C _J 4600 pF	V _R = 5.0V, T _C = 25°C

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T _{STG}	-55°C to 175°C
Operating junction temp range	T _J	-55°C to 175°C
Max thermal resistance per leg	R _{θJC}	0.05°C/W Junction to case
Max thermal resistance per pkg	R _{θJC}	0.25°C/W Junction to case
Typical thermal resistance (greased)	R _{θCS}	0.08°C/W Case to sink
Terminal Torque		35–50 inch pounds
Mounting Base Torque		30–40 inch pounds
Weight		3.4 ounces (95 grams) typical

FST20035 – FST20050

Figure 1
Typical Forward Characteristics – Per Leg

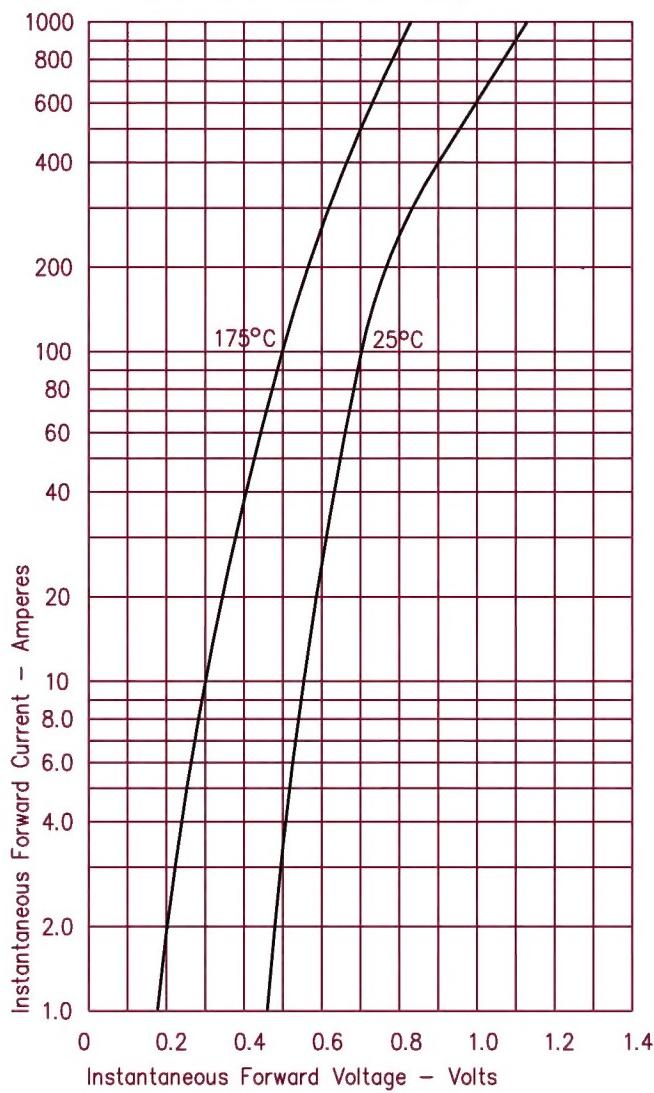


Figure 2
Typical Reverse Characteristics – Per Leg

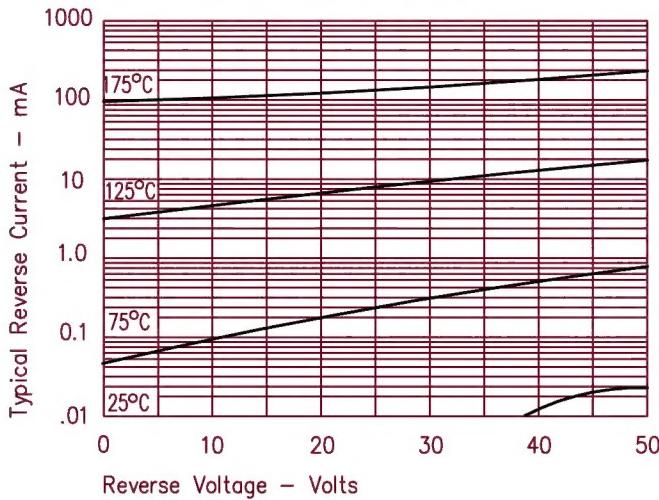


Figure 3
Typical Junction Capacitance – Per Leg

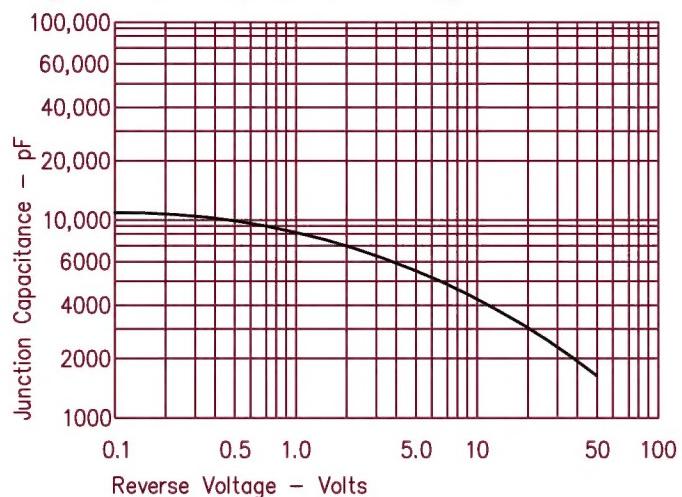


Figure 4
Forward Current Derating – Per Leg

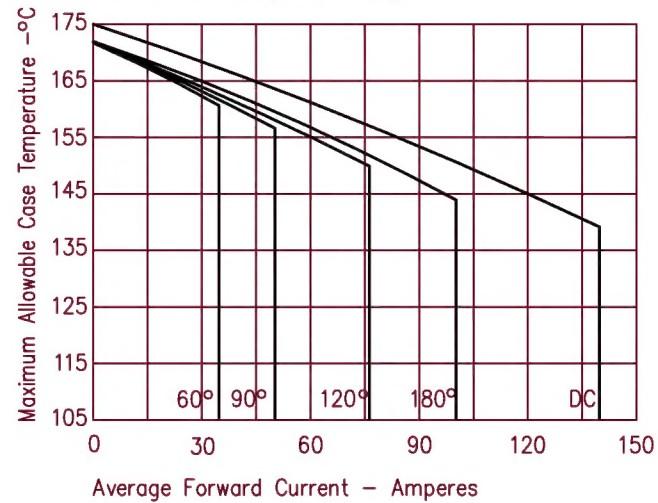


Figure 5
Maximum Forward Power Dissipation – Per Leg

